

**Please add the following Abstract of the Disclosure:**

A non-volatile memory system (10) is provided. The system comprises: non-volatile memory (11) divided into a plurality of segments (11) each segment having an address in an address space, means for copying any one segment to be reprogrammed into a first RAM (RAM1), the first RAM having a size at least equal to the segment size. The system further comprises a second RAM (RAM2) for holding a reprogrammed code, writing means for writing the reprogrammed code from the second RAM into the at least one segment to be reprogrammed, and control means (MMU) arranged to enable execution of the programme from the first RAM during the reprogramming.